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macerated and placed in the pool. Some of the writer's informants claim that a poison grass is used similarly.

A fish is cut in halves the long way and cooked immediately because it is believed that if a bit old when eaten it causes leprosy (but see Magic, page 207).

Oysters, periwinkles, and the many varieties of bivalves gathered by the women are cooked on the shore at the spot where they are collected. A fire is made over stones and the shellfish put on the hot stones and embers. The shells open or crack and the flesh is removed and eaten by the women or placed in small receptacles to be carried home to the men.

Honey is gathered by both sexes, but usually by men. When a hive is discovered in a hollow tree that is not too large the tree is cut down and the trunk split open. The honey is usually eaten where found. [136] Gathering honey is a painless task in Australia because the native bees are stingless. The honey is often put in a water-tight basket, mixed with water and drunk as a beverage. It is never allowed to ferment; the natives have no intoxicating drink. The wax is formed into a ball and put in the men's baskets to be used in the construction of various implements.

Pandanus fruit, ripening about August, is cut up into fine pieces and cooked. The small cabbage palm is gathered about the same time, the whole trunk of the plant being cooked and beaten on a log, and the glutinous product eaten. Spear grass is chewed by the children as well as the other people.

Cycad palm nuts are gathered from the center of the trees by the women with the aid of a forked stick placed against the trunk to make a rough ladder. The nuts are knocked off with a club if they are too high to reach. The outside skin is removed and the kernels are placed in a large basket which is submerged in a fresh-water pool and allowed to remain several days until the poisonous qualities of the green fruit are removed. Sometimes the women first heat the nuts, thus reducing the time for soaking them.

Several varieties of tree grubs are eaten. Both men and women gather them. They select trees which have the proper indications upon them, split open the trunk, and remove the grubs which are washed and eaten raw. They look much like the entrail of a fowl and taste much like a snail.

The nests of all the larger birds are robbed and the eggs eaten. During the proper season the various sea birds lay their eggs in great

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quantities regularly in certain spots along the coast. These eggs are greatly relished by the natives.[8] 222

3. *Kinship Customs*

The enlargement of a Murngin's economic behavior is dependent on two factors: (1) the horde; and (2) certain reciprocals in the kinship structure. All the relatives of a Murngin ordinarily exchange gifts with him, but certain kinship personalities do this much more than others. The mother's brother—sister's son relationship has been seized upon as the mechanism for enlarging the economic life of a Murngin man. "Far-off" wakus and gawels are sought by a man, distant not only socially but geographically; the greater distance a man has between him and a trading waku or gawel, the greater pride he exhibits when displaying articles sent or brought to him by his relative, and the greater satisfaction he feels when sending or returning gifts. (See chapter on kinship, page 95.) 431 604

The mari-kutara relationship is much the same, except that there is a tendency to indulge in ritual gifts much more than in those from the ordinary material culture. The feathered string which has been the decorative covering of the totemic poles is sent by mari or kutara to the other. This exchange of ritual goods plays a prominent part in the economic life of the people, since if a mari receives a gift from kutara he must, in a not too great period of time, return a present of like ritual value. The finely turned string, often used as ritual string, is usually made by women, at times hundreds of feet of it. It is generously covered with birds' feathers and used on one of the larger totem poles. Obviously a great amount of work on the part of the women and the killing of a large number of birds is required to meet the needs of ritual exchange. Only the red feathers from the breasts 431 602 283 283 237 431

[8] The people of the various areas, particularly those west and east of the Goyder, are always accusing each other of cannibalism. The author can vouch that no cannibals are present among the peoples east of the Goyder and roughly in the Murngin area. The Murngin tell a number of stories of the people south of Cape Stewart which to them prove the existence of cannibalism there. Some of them claim they have seen men's baskets filled with meat which was neither kangaroo nor dunong and which they were convinced was human flesh. In one account I collected, the narrator described watching a cannibal feast. The victim, a large man, was carved and prepared for cooking. There is much scornful joking among the Murngin about these people to the west of them. When they think they see human flesh in the basket of one of these people they say, "Ah, what is this one?" and another Murngin replies, "Oh, that's a kangaroo," with a sarcastic inflection in his voice. The other one says, "Yes, but it doesn't smell just like kangaroo," to which the reply is made, "Oh, well, maybe it's only a dead man." 266 186

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283 of the red-breasted parrot can be used for certain totemic emblems.
237 To collect a sufficient supply of red feathers to put on such totems as
431 their fire, woman and other Dua moiety totemic emblems demands considerable industry not only on the part of the totem makers in their daily hunting and robbings of birds' nests but also in gift exchanges. This means that red ocher and other body paints, spear heads from the interior, carved wooden spears from the coastal belt, and other objects of economic value must be had to trade. Small white feathers from hawks' breasts and from the sulphur-crested cockatoo and the blue-eyed corella are also used for the string of many totems. The larger feathers of the cockatoos and the yellow crest of the sulphur-crested cockatoo are used for the great ritual headdresses made by the [314] men with the aid of adhesive gathered from the ironwood tree and the honeybee's hive. Ironwood resin makes a very hard, durable cement and is used for many purposes for which the beeswax is too malleable. [237] Ordinarily the beeswax is preferred for the molding of head pieces because the proper shapes can be more easily obtained.

431 Obviously the extension of the kinship personality of a man by the exchange of gifts between far-off relatives or the strengthening of the 602 bonds between near kin such as mari and kutara definitely stimulates economic enterprise. More labor is necessary than if these mechanisms were not present. The goods themselves take on higher value from [178] their use in the totemic ceremonies; the totemic strings absorb some of the clan ceremonial power and, once used, are taboo to the uninitiated. They are of course valuable in another ritual since they will be used by the receiver for his own totemic emblem and then be passed on to other reciprocating relatives.

4. *Property*

423 Relating Murngin technological articles to human beings by the concept of ownership is one of the methods of controlling and regulating this society's adaptation to the natural environment, since it incorporates the various articles of technology into the general social order. The Murngin concepts of property are developed into a variety of forms according to the type of thing owned. Land is divided among [614] the clans; and definite areas and their natural objects such as trees, water holes, and the like are considered as belonging to these exogamic 423 units. Derivatively the moieties are also supposed to have an "owning" relationship to the land areas of the country. This means that not only 616 are spatial divisions organized by the separation of all things on the

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313 Wood is chosen for its degree of hardness and weight and also for its shape according to the purposes of the object to be made. The main forms used are (1) long, slender, light (or heavy) shafts; (2) hollow logs; (3) roots with a well-defined arc; (4) long, straight, slender trunks with thick roots running off at a right angle from the shaft; (5) forked sticks; (6) ends of branches with many twigs and leaves; (7) any variety of dry wood; and (8) very large light wood tree trunks.

314 Three types of bark are used: (1) a long, thick, wide type found on the trunk of the larger eucalyptus; (2) thin paper-like bark from the Melaleuca; and (3) long thin fibers of root bark easily macerated.

Many varieties of leaves are technological material. They are usually [252] gathered in bundles by breaking off branches, but one large-leafed species is used singly as a plate on which to put fresh meat for cooking.

The long reeds of the water-lily ponds, spear grass particularly, and many other varieties of reeds are utilized.

237 The few animal materials used are, from land animals: kangaroo fat, kangaroo gut, kangaroo leg bones, bird feathers, bird bones (particularly leg), opossum fur, opossum gut and human hair; from sea animals: sting-ray prongs, fish and shark vertebrae, bivalve shells, and the melon shell.

317 Deposits of red ocher and pipe clay are mined along certain portions 316 of the seacoast. Yellow ocher is found in outcroppings. Round river stones about the size of goose eggs are gathered. Diorite stones are also used. Quartzite is quarried from outcroppings. Ordinary earth and sand are used in making houses and ceremonial objects on the ground. Rock 342 ledges forming caves are utilized as shelters during the rainy season. 312 Rock basins which catch rain water are used as types of primitive cisterns to supply water in the absence of wells and fresh-water courses.

3. *General Description of Technical Methods Used in Making Raw Materials into Cultural Artifacts*

000 Only the general methods by which raw material is formed into artifacts will be discussed here. Each specific technique will be described in the section dealing with the articles manufactured.

412 The chief tools used with food are the ground stone axe,[4] a knife (formerly made of bone, but, since the Malay contacts, of iron), and a variety of bivalve shell.

322 Cylindrical wooden articles are made by cutting down a tree or

[4] The iron tomahawk is now used in its place.

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small fire. It is used to haft wooden spear heads to their shafts, to articulate the peg of the spear-thrower to the shaft, and also to haft the feathers of some of the larger headdresses to a wooden or bone shaft.

Beeswax is used to join the stone spear head to the shaft, it serves as the core for the various feather headdresses, it is used to make the mouth of the wooden trumpet small enough to fit the lips, and at times it is used as calking material for boats. It is also pushed into the hole always made in the septum to give the nose, for purely aesthetic reasons, a very concave form. (If beeswax is not used, small rings are made by wrapping two ends of cane together with fiber string and inserting them in the hole made in the septum.) When not in use, beeswax is molded into a flat mass and carried in a man's basket.

Human blood or the sap of an orchid bulb (djelkork) is used to glue feathers and paint to the dancers' bodies for the various ceremonies, and to stick these same materials on their totemic emblems. When the bulb is used, it is chewed and the macerated end rubbed on the object to be decorated.

Hafting.—Wooden objects to be hafted together are always carved to fit nicely. Ironwood resin or beeswax is heated and applied to the parts, which are then fitted together and wrapped with fiber string.

III. Murngin Artifacts

In the last few pages we have briefly described the Murngin in relation to their natural environment, the kinds of materials they select from the environment, and the more general techniques used in fashioning their tools. In Appendix II, pages 471-505, we shall describe the various articles of the technology and their manufacture.

Murngin technology is forever subject to two fundamental changes: first, the constant movements from food ground to food ground, and, secondly and more radically, the exigencies of the alternate rainy and more favorable dry seasons. Both are essentially problems of environmental adaptation: the one involves the adjustment of man to his food supply rather than vice versa through an agricultural or pastoral economy; and the other is an adjustment to a semi-annual seasonal change which can best be stated in terms of fifty to sixty inches of rain during three or four months and none at all during the rest of the year. These adjustments have profoundly and fundamentally affected Murngin technology and, as we shall see later, their ritual and myth.

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884 5. Snail shell rattles are manufactured.
6. A bark house is constructed and is painted with ceremonial designs.

1. While the group of headdress dances of Section F dances is being performed, two emblems are under construction. They are large representations of the Dua kangaroo and Yiritja kangaroo tails. The smaller [211] emblems previously mentioned function as message sticks for the kangaroos who announce the ceremony to the other tribes; these larger ones are used as emblems in the ceremony. They are brought out by the dancers who jump over each other. Yiritja jump over the Dua and Dua over the Yiritja in the same manner as our children play leap frog.

2. If the ceremony is to last two years the snake dance ground is not excavated, since it forms a part of what is considered the final portion of the Ulmark. If it is decided to complete the ceremony in one season, the Yiritja and Dua kangaroo messengers dig the dance place to a depth of a man's shoulder. It is in the center of the dance ground and well protected by heavy clumps of jungle growth. It has the same triangular shape as the snake ground in Section D and the one found in the Djungguan ceremony (which is not dug but is on the surface of the ground); but in addition it has a pathway dug to one side of the triangle. It is the python snake's body. It is supposed to face the southeast both in this ceremony and in the Djungguan. Bushes are piled in it at the head of the ground.

3. The women's dance ground is only a cleared space in the center of the general camp.

4. While the men are digging the triangular snake ground, the women, of both home and visiting clans, clear a small path which encircles the whole of the men's ceremonial grounds. (It winds and twists like the track left by a huge python.)

5. After the excavating has ceased, the men gather dry snail shells. [237 These are painted with red ocher on which is dotted white clay. A half 534] dozen of these shells are strung on one string and tied to a spear-thrower. Several of these snail-shell rattles are made.

6. A bark house is also built on the ceremonial grounds. The house [342 is the same in structure as those used in the rainy season. The interior 531] walls are painted with realistic and geometric figures (which illustrate the story of the two Wawilak sisters).

884 *Native Interpretation.*—The triangular and the women's dance 713 ground are identical with the Djungguan dance places and are looked

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(here Sections A, B, and C) frequently is given first, not only because of lack of materials, as was stated for the Dua Narra ceremony, but also because it is felt that it makes the log "stronger" and better. Various people arrive; they bring balls of opossum fur and string. Opossum fur is a decorative material used for Yiritja ritual and symbolizing this moiety just as red parrot feathers are the materials for decorating Dua ceremonial objects.

The same preparations are made for carving and painting the totemic emblem; "flood" from the totemic wells flowing to the sea and "ocean tides coming in" are danced on the Narra grounds which have been made on the old men's grounds. Instead of dancing red parrot and water, the Yiritja dance bandicoot and water. Flood water is danced back and forth on the small quadrangle, then the leader calls out:

"Bir-ka bir-ka (conventional Yiritja announcement of Narra power words) djar-a (spring water)
Bir-ka bir-ka mill-yar-ui (tree growing out of a spring)
Bir-ka bir-ka ga-urn ga-urn (gravel boiling in spring water)
Bir-ka bir-ka ka-ku-lor-oi (small rocks in the bottom of a spring)
Bir-ka bir-ka kar-a-ko-ar-oi (a small valley where the water runs)."

Once more the sound of water is repeated and a new dance is started. The leader calls out the power names of bandicoot. All the chorus gets down on its knees and elbows while the leader sings out, "Gorn-djur-djur [bandicoot] yer-mer-da [bandicoot]." The bandicoot always follows water in the Yiritja ceremony, after which the men return to the general camp. As they march along in single file, the leader walking to one side, they call out "Kar-ra-ark! Ye!" This is supposed to be the name of the tree which the leader usually climbs when he calls out the power names in the main camp. It also lets the women know that they must run and be gathered at the tree when the men arrive.

When the men arrive in the main camp and approach the tree the women run away from it and return to their huts. The leader runs straight toward the tree and points at it with his singing stick while he calls out its power name. Any convenient tree is picked for this purpose and it can be of any species, providing it is large enough for the leader to climb when the occasion arrives.

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283 and coarse in character. Occasionally, when there is no available supply of cord and it is necessary to tie a bundle, string is made by merely splitting bark into a few fine strips which are used without further treatment. The inner leaf of the pandanus is also used in an emergency, but two strands are first twisted together on the inner side of the leg. A cord of human hair is twisted with another string to make a large coarse twine, not only for added strength but because the larger size has a greater aesthetic value.

When vegetable fiber string is to be made, a Murngin, without the aid of a stick, starts digging at the base of a tree trunk until he has followed a large root out to where it branches into smaller ones. The diameter of these latter roots is about the size of a man's finger. They are broken loose and cut up into two-foot lengths and taken back to the camp.

A small shell is used to scrape off the outer bark. The root, with the inner bark still attached, is placed in the string-maker's mouth and bitten, so that several long straight lines perforate the inner bark from end to end, enabling the manufacturer to remove it in several long thin strips. After all the roots have had the same treatment, the strips are soaked in a small paper-bark receptacle of water for about half an hour. They are then put before a fire to dry until most of the moisture has evaporated, when they are deposited in a basket to remain there until the maker is ready to complete the operation, usually immediately. Two strands of the root fiber are held in one hand about an inch apart and rolled together on the inner side of the upper leg. This forms the raw, loose bark fiber into a small round strand. Another strand is made the same way. Then the hand is rubbed from the knee upward across the two strands, and a short piece of cord, about two-thirds the size of the maker's hand, is formed. The next piece of raw fiber is added to one end of the cord and the operation of rolling repeated. Except for the first addition, only one new piece of material is attached at a time, so that there will not be a weak spot at the same place in each strand of the two-ply cord.

●[237] The small feathers or down of a cockatoo, jabiru, or other bird are rolled into the fiber string if it is to be used for decorative purposes, a ceremony, or a totemic emblem. The feather is first rubbed in the fingers to force the lateral fibers to project at right angles and evenly on both sides of the quills. Feathers are sometimes added at rhythmic intervals with the aid of beeswax.

302 283 Human hair string is manufactured by an entirely different technique. The natives save their hair when they cut it. It is usually two or three inches long, since both men and women in northeastern Arnhem Land do not wear the long hair seen in other parts of Australia. The cut hair is usually wadded into small loose balls, wrapped in paper bark, and kept at the bottom of a basket. The string is not made until a sufficient quantity has been gathered to form a cord several feet long.

283 A spindle eight to ten inches long, about one-eighth inch in diameter,

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Fish-vertebrae Necklace.—The vertebrae of the larger fish, including sharks, are cleaned, bored, covered with red ocher, and strung on a strand of fiber string which is tied tightly around the neck. These necklaces are worn by all members of the tribe on any occasion.

Human-hair Belts.—The Murngin wear a belt or band made of human hair which fits tightly across the upper portion of the buttocks and around the sides as far as the hip bones, where strings are attached and tied in front of the pubic hair. There are two types, a bundle or cylindrical one, and a flat or sewn variety. One continuous human hair string about fifty to sixty feet long is looped back and forth and the end of the bunch of loops wrapped for one-half inch with fiber string or human hair. The belt has a norm of about twenty-two inches, which varies from twelve to twenty-four inches. It has about fifty-five strands in it, but varies from twenty-four to sixty-five. Frequently the opossum pubic covering is attached to this belt, although usually it is worn by itself. A single small loop may be left at each end to which the fiber string for tying is attached.

The flat type of belt is made with one continuous string looped about thirty times. Vegetable fiber or human hair string is tied about each end of the bundle, which is flattened by stitching with bands of fiber string at about three-inch intervals. This allows the belt to fit snugly against the buttocks of the wearer and across the small of the back.

Ceremonial human hair belts are made by wrapping red parrot feathers over each of the strands in the belt to form a solid layer of red. The wrapping material is pandanus leaf. These belts are always made from the hair of dead persons, which limits the size of the belt. The strands varied, in the few examined, from six to twelve in number. This belt is only worn on ceremonial occasions and no woman may see it, even though it is made from the hair of either men or women.

Pubic Aprons.—The pubic apron, usually of opossum fur string, is less an item of clothing than an article of adornment. Although it is an expression of the people's modesty, it is classed with necklaces and bracelets rather than as a covering for the genitalia. It is composed of a basal strand and a fringe. The basal strand is usually of fiber string, but occasionally human hair is used. The fringe is made of one continuous strand of opossum fur looped about the basal cord. Each loop is twisted into a two-ply tassel, which is about ten inches long for men and five to six inches for women. The ends of the basal strand are tied in a large knot to keep the loops from slipping off. The apron is attached to a belt.

Baskets.—Since all baskets are carrying baskets equipped with carrying-strings, they also have been placed in the category of things worn.

All basketry in this district is made by the twining technique. The inner layer of the pandanus leaf and water-lily fiber are the two materials used. The latter is found only in the open-work type of basket, while the former is generally used for the tightly woven mesh, and occasionally also for the

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285 415 531 Red parrot feathers are woven or stuck into the men's baskets. Usually they form a small band around the top of the basket, sometimes a solid mass over the upper half of it, and again they outline the ordinary square pattern that covers the entire surface. Human hair is sometimes stitched on for an outline instead of feathers. It is also used as a fringe over the entire basket or on a line about two or three inches from the top. Opossum fur is also used as a fringe and to outline the diamond pattern.—Any of the described baskets may have from two to eight pendants of parrot feathers hanging from the rim of the basket to several inches beyond its bottom.

285 415 [482] B.—The large type of open-work basket has the greatest size of any found in this area. It is thirty-two inches by eighteen inches in size and has a mesh of three-eighths of an inch. It is carried by a woman by means of a fiber-string forehead band and is usually used for gathering cycad palm nuts. The smaller-sized open-work basket has a mesh of one-quarter inch. It normally is seventeen inches deep, but varies from fourteen to eighteen inches. It has a diameter variation of from six to eight inches. All open-mesh baskets are stitched at the top. None is ever decorated, and all of them are used by women to gather food and to carry their personal belongings.

381 *Armlets, Wristlets, and Anklets.*—The native armlets are usually made by the plaiting technique. The plait consists of from two to five strands, two being the normal number. The armlet is normally from one-half to three-quarters of an inch in width, but sometimes reaches a width of two inches. The diameter corresponds to the size of the wearer's arm. Wristlets, but not armlets, are made on the arm of the wearer by another person and worn until they fall off.

Spear grass is the usual material. The grass is split into two or three pieces and soaked in water for one or two days before it is ready for use. A small stick or bone is used for tucking in the free strands to give the ornament a smooth appearance and keep the edges from breaking to pieces. [531] Sometimes fiber string is wrapped about the armlets, and many are painted with angular designs.

Women wear a series of armlets half up the upper arm, but men only put on a few.

Another variety of armlet is made from the end of a piece of cane. About a quarter-inch width of the reed is wrapped with fiber string which has feathers woven into it, or feathers are bound to the armlet with a cord. [537] Frequently from two to four parrot-feather string pendants, tipped with white cockatoo feathers, are hung from the armlet; these usually have a core of human hair on to which the feathers are wrapped with fiber string. The same technique is used for feathered string pendants as for other objects decorated with feathered string.

Anklets are sometimes made in the same way as armlets; but whereas the latter are worn by men, women, and children most of the time, the anklet is seldom worn.

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fiber string to keep the impact with the target from spreading the prongs and splitting the shaft. This spear is used only for fishing. When the natives are able to procure them, they sharpen small iron rods and substitute them for the wooden prongs.

C. *Sting-ray Spears.*—The barbed prongs found on the tail of the sting-ray are kept by the native hunter. After he has gathered anywhere from twelve to thirty, he attaches them to the end of a seven-foot shaft. The hafting is done with resin and a wrapping of fiber string. Beeswax is never used. The prongs are so arranged that they present a semicircular set of points to the enemy when thrown. This spear is used only for fighting.

All fighting and hunting spears are used without alteration in the various ceremonies. A challenge spear, however, is especially made for one particular purpose and functions in no other way. The native takes the usual small-size cane-shaft spear (Variety 2b), paints it with alternating bands of light and dark paint, and wraps it with feathered fiber string. Two tassels are hung on the handle end. Two of these spears are sent the enemy as a challenge to an open fight.[3]

A toy spear is used by the small boys and thrown without the use of a spear-thrower. It has, therefore, no hole for articulation at its handle end. Instead of a point, it has a wad of paper bark tied with fiber string at its distal end to prevent injury to an opponent. Sometimes feathers are added as ornaments. This spear is sometimes only a straight stick without the paper-bark covering.

Clubs

The Murngin do not possess the smaller clubs found farther south in Australia, nor do they have any type of throwing club. All clubs found here in the north are of the large type, are used for striking a blow, and do not leave the hand when in use.

The two main types of clubs are: (1) the flat-bladed type, and (2) the bird-headed or jabiru-headed type. The first has two subtypes. The jabiru form has been given this name because it both looks like and is painted to represent a jabiru's head. Its shaft, a cylinder two inches in diameter, is about four and one-half feet long. It weighs about four pounds. The head of the club is about one inch long and joins the shaft at almost right angles. The trunk and root of the mangrove tree are used as raw material. The root is used for the head, and the trunk becomes the shaft. The shaft is painted red and white. A small hole is cut in the head and the edge painted to represent a bird's eye. The "beak" of the bird club head is sharpened and used as a hook or pick. The fighter gets the head of the club behind his antagonist, pulls it quickly forward, and hits him on the back of the neck;

[3] See the chapter on Murngin Warfare for a further description of the way this spear is used.

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The technique has not been lost, for several old men know how they are made.

Food Grinding Stone.—These small stones are used to grind up seeds or nuts gathered by the women and to break mussel shells. They are three or four inches in length, the same in width, and about two inches in thickness. A rock of the proper shape is used and no artificial shaping is done. However, there is a socializing agency at work, in the sense that a round rock flattened on the two opposite sides is preferred and, further, the grinding gradually works the center into a cavity; such a stone has now assumed value and is sought for by a woman in preference to a new stone. The depression is sometimes an inch and a half deep. The stone weighs about a pound and a half normally, but varies from one-half to two and a quarter pounds.

A larger-sized grinding stone also used by the native women is five inches by three inches and weighs about four pounds. It is also flattened on two sides.

The upper grinding stone, or grinder, is usually egg-shaped and is nothing more than an untreated smooth water stone. It has a diameter of about one and one-half inches and weighs from one-eighth to a quarter of a pound.

Camp Wells.—Two types of wells are dug during the dry season. The first is made more or less unconsciously by each person's excavating a small amount of earth from the bottom of a shallow water hole and continuing this process as the water dries up in the latter part of the season. The second variety is purposefully dug where water is known to be. It may be one or two feet in diameter or large enough to allow a man to get down in it to fill his paper-bark basin. Wells of this type sometimes reach a depth of four or five feet. Associated with an artificially constructed well is usually found the long-handled paper-bark container, made by attaching a long stick to an ordinary container with fiber string.

Bridges.—The Murngin often construct rude bridges by placing one to three tree trunks over the smaller streams about the camp.

7. Articles Used in Ceremonies

Feather Headdresses.—The chief materials used in making feather headdresses are resin, beeswax, fiber string, feathers of various birds, leg bones of birds, and wooden or sting-ray prongs. The feathers are hafted to the wooden, bone, or sting-ray pins with ironwood resin. White and black cockatoo tail feathers, the crest of the sulphur-crested cockatoo, emu, jabiru, egret, heron, native companion, goose, and duck feathers are the chief ones used, but feathers of other birds are also utilized.

The pin of the Gunabibi type of headdress is four to six inches long, and usually incised and ruddled if of wood. Sometimes the pin is made from the leg bone of a bird. The resin or beeswax hafting is in the shape

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287 of a cone and is about one and a half to four inches long. It flares out at
292 the feather end, where it has a diameter of about three inches. The hafting material is always painted.

The diameter of the bunch of feathers has two norms, according to the species of birds' feathers used. The first norm ranges around fourteen to sixteen inches, and the second from twenty-two to twenty-six inches. The feathers of the former are emu, black and white cockatoo, black goose, native companion, ibis, egret, jabiru and heron. The latter is always composed of emu tail feathers. Sometimes, instead of being hafted to a pin, the feathers are attached to a loop of string large enough to go around the wearer's head and allow the headdress to hang down the back of his neck and body. The pin type is used in the Gunabibi ceremony, both for making the "head of Yermerlindi," the Great Father Snake, and for the male dancers. The latter wear the feathers attached to the peak of a "dunce cap."

The kurt kurt type of headdress has the same general shape as the Gunabibi type, except that the feathers are spread out fanwise, and the beeswax, which is usually used instead of resin, is flattened instead of conical. The pin is usually a sting-ray prong, since the barb on this adheres to the wearer's hair more easily than wood or bone, but sticks and bones are sometimes used. The pin is about one to two inches long, the wax about three-quarters of an inch in length. The feather part of the headdress has two norms, one of which is eight inches and the other twelve. The smaller one is composed of crests of the sulphur-crested cockatoo, the twelve-inch one from the wings or tail of an emu. The kurt kurt is worn in such a manner that the fanlike feathers form a brim resembling that of a modern cap or eye shade.

287 The feather fan is made the same way as the kurt kurt headdress except
293 that stiff wing feathers of the jabiru or black goose are used instead of the softer feathers of the kurt kurt. A fan is used when making a fire or as a fly swatter. Often the lower wings are cut from the carcass of the jabiru or black goose and used as fans without further treatment.

778 *Rangas* (*Totemic Emblems*).—Technically the totemic emblems divide into two main classes. The fundamental structure of each is governed by the materials of which it is made. The first type is the wrapped paperbark form, and the second the carved wooden type. An occasional third type is the stone ranga. Each may have additions to its main structure, but basically there is no variation. Still another type of ranga is formed when mythical paintings are placed on an article of the material culture which is the totem of the group (stone axe, bark boat, et cetera).

Designs are painted on all rangas.[5]

[5] The designs used and their meanings will not be discussed here, since we are considering only the technological processes.

3: Mountford E-5 (1948) 1956 OI17 Murngin OI17

*773
825
*532

Salt-water Fish

Plate 119D depicts a number of salt-water fish.[46] On the bottom is a row of seven saw-fish, *baraka* (*Pristis* sp.). On the right-hand side at *a* are two rows of four sharks, *djerun-berunani*; above them at *b*, seven gar-fish, *ma-aua* (*Tylosurus* sp); and opposite, at *c*, three shovel-nosed rays, *bandrung* (*Rhynchobatus* sp.). The cross-hatched areas represent the sea.

(6) Insects

The Stingless Honey Bee, Koko

During creation times there were two *dua* groups of the wild bees, *koko* (*Trigona carbonaria aughophorie*), the male ancestor being *jarapang* and the female, *lirawar*. These male and female bee ancestors lived in a hollow tree near the edge of a large swamp at Macuti on the Koolatong River.[47]

Plate 120C represents two hives, the male wild honey, *jarapang*, on the right and the female honey, *lirawar*, on the left. The significance of the divisions are the same in both hives. The dome at the top represents the bee bread (young bees and pupae); *f*, more bee bread; while panels *b* and *d* are honey and *a*, *c* and *e* beeswax. All these parts of the hive are edible. The aborigines distinguish clearly between the flavour of *jarapang* and *lirawar* honey.

[262]

Plate 120A is a representation of a group of hives of the honey bee. The black transverse lines *a*, *a*, picture the limbs of the tree in which the hive is built. The dots in the panel *b* are the bees, the cross-hatched central section, *c*, the honey and the honey-comb. Hard wax, much sought after for mounting spears and other implements, is indicated by the dotted transverse band *d*; the dotted panel *e* pictures the rubbish, dead bees and excreta from the hive. Tree roots are indicated by the lower cross-hatched band, *f*. Both the male hive, *jarapang*, and the female hive, *lirawar*, are in this group. Reading from the right, one, two and five are *jarapang*, three and four *lirawar* hives.

● [237]

(7) Topography

The Sea and the Sky

*532 This bark painting depicts a wet-season seascape. It makes an interesting comparison with a painting of a similar subject by a European artist. Although the aboriginal pictured the sky in the same manner as a white man, that is, in side elevation, he has painted the sea in plan, so that he can show the creatures on the sea-floor.[48]

In the upper panel of Pl. 120B are three thunderstorms drifting across the sky. The black bases of the two on the right indicate that they have not yet discharged their rain. The cross-hatching on the upper edge, however, indicates rain. On the left is a thunderstorm which has almost expended itself, although the rain is still falling. The clear space between the storms is the blue sky. The

46. Interpretation by F. M. Setzler. 47. Map. Fig. 57.
48. This characteristic is not unusual in the art of the more advanced peoples: e.g. Pl. 204;

The design, Fig. 59D, deals with the totemic place at Calataibi of the fresh-water tortoise, *mimala*. On the upper half of the pipe *Mimala* and his wife are resting on two sand-bars, *a*, *a*, in the stream. The shaded *zigzag* lines, *b*, *b*, represent the swamp grass and *c*, *c*, the plain spaces between, the running water. The heavy black line, *d*, indicates a tree which has fallen into the stream. On the left-hand, the upper and lower figures *f* and *g*, in the central panel, are two cat-fish, *mambira*, the fleshy tentacles from the mouth of the fish being diagrammatically represented. Between the fish at *h* is a fruit, *nalpu* (presumably that of a pandanus palm), which grows along the river bank. The shaded *zigzag* areas, *e*, *e*, on the left, indicate the swamp grass where the tortoise lays her eggs; *c*, *c*, are streams of running water.

Wild Honey, Koko. The Male Ancestor, Jarapang

The male ancestor, *Jarapang*, of *koko*, the wild honey totem, belongs to the *dua* moiety. His totem place is in a hollow tree at Macuti, on the Koolatong River.

The diamond-shaped figures, *a*, *a*, on Fig. 60A symbolize the honey in the comb and the dots, *b*, *b*, the pupae of the young bees. The torpedo-like figure, *c*, at the upper right, is the wild bee ancestor, *Jarapang*, resting in his hollow tree at Macuti, represented by the long rectangle, *d*.

Wild Honey, Koko. The Female Ancestress, Lirawar

The *dua* female wild honey ancestress, *Lirawar*, lived with her husband, *Jarapang*, in a hollow tree near the Macuti swamp on the Koolatong River.

Fig. 60B represents a hive of wild honey; the chevron designs, *c*, *c*, occupying most of the pipe stem, represent the honey in the cells. The transverse bands, *a*, *a*, indicate the bee bread and the pupae of young bees; the other transverse bands, *b*, *b*, the hard wax.[75]

The Thunder-man, Bolngo

Bolngo is a mythical thunder-man who lives at Wulwulwi, near the mouth of the Koolatong River. At the beginning of the wet season, *Bolngo* climbs to the top of a high paper-bark tree and urinates. When *Bolngo's* urine splashes on the ground it goes into the sky to form clouds. The rain from these clouds makes the water flow in the stream at Wulwulwi.[76]

On Fig. 60C, panel *a* represents the paper-bark tree on which *Bolngo* stands; *b* is *Bolngo* urinating; *c* is the urine splashing on the ground; and *d* is *Bolngo's* camp at Wulwulwi. The two parallel panels, *e*, *e*, represent the bed of the river, Wulwulwi; the sloping lines, the water pouring into the river from subsidiary

75. This wax is used extensively for mounting stone implements, repairing utensils and moulding animal figures.

76. *Bolngo* is a parallel myth to that of *Tjamburul* at Yirrkalla. See bark painting, Pl. 90B and 93B, also myth, p. 287.

3: Mountford E-5 (1948) 1956 OII7 Maragia OII7

5

CARVED AND PAINTED FIGURES

The decorated figures and objects collected in Arnhem Land can be grouped in four classes: Human and animal figures, carved in wood, modelled in wax or made from bark, belonging to both north-eastern Arnhem Land and Groote Eylandt; the human penis; carved and painted ceremonial objects associated with ancestral beings and totemic groups of western Arnhem Land; and decorated implements and weapons.

Human and Animal Figures. It has been known for many years that the aborigines of Australia, and especially of Arnhem Land, produced carved representations of men and women in wood. Warner,[1] during 1926-9, saw at Milingimbi mortuary posts four to five feet long, erected over the graves of the dead, on which 'a series of incisions may be made at the top . . . to give it the appearance of a carved "head" with one or more necks.' Worms,[2] in 1912, records carved human figures used in the Goramara ceremony of the Kimberley regions of north-western Australia. In 1948,[3] and again in 1949,[4] the Berndts described wooden figures from Yirrkalla in north-eastern Arnhem Land, and in 1953 Mountford[5] records a wooden figure from the Durack Ranges of north-western Australia.* The aborigines of Yirrkalla also make human figures in bark and wax. Worms[6] illustrates similar bark figures used in the Goramara ceremony, and McConnel[7] a figure in wax from Cape York, Queensland. During the expedition's stay at Yirrkalla, I collected a number of human figures made in wood, wax and bark.

Animal figures carved in the round have been found over a much wider area than have the human figures. Spencer[8] illustrates a carved turtle and a fish from Oenpelli. There is also in the South Australian Museum collection a carved crocodile from Cape York, a dugong from Melville Island, fish from both Elcho and Goulburn Islands, and carved reptiles and animals from the Nullarbor Plains of South Australia. Further research will, no doubt, show a much more extensive distribution of this type of handicraft than the present evidence indicates.

The Human Penis. A number of specimens of the human penis, in stone and wood, have been collected both in central and north-western Australia and in Arnhem Land. Campbell[9] illustrates two penes carved in stone and one in wood from north-western Australia; Mountford[10] figures two stone sub-incised penes from the same area, as well as a stone circumcised penis and a ceremonial knife

1. Warner (1937), p. 301.
2. Worms (1952), Pls. 1, 7.
3. Berndts (1946), Pls. 1-2.
4. Berndts (1949), Pls. 1-3.
5. Mountford (1954), Pl. 1, Figs. 1, 10.
* Since going to press, Mountford has seen the aborigines of Melville Island carving human figures in the round.
6. Worms (1952), Pl. 6.
7. McConnel (1953), Pl. XVII, Fig. 1.
8. Spencer (1928), Pl. XVI.
9. Campbell (1921), p. 145.
10. Mountford (1956), Pl. 8, Figs. 1, 3, 1-4, 1

[P. 414 contains no text]

3: Mountford E-5 (1948) 1956 Oil7 Muragin Oil7

CARVED AND PAINTED FIGURES

5. FIGURES MOULDED IN WAX

(1) Human Figures

Among the wax figures collected at Yirrkalla was one of the boomerang-man, *Oijal*, and one of his wife, *Neri-neri*. McConnel[91] records a waxen human figure used in the increase ceremonies of Cape York, and Elkin and the Berndts[92] several at Yirrkalla which, they claim, were used in imitative love magic and to cause the death of an enemy.

Plate 104E is *Oijal* with boomerang-shaped designs painted on both the front and the back of the figure. Around his neck the lines of dots have the same meaning as in the bark painting, Pl. 29A, i.e. body decorations. Pl. 104F is *Neri-neri*, whose body is also decorated with lines of paint.

(2) Creatures

The aborigines of north-eastern Arnhem Land are expert in the modelling of small animal and human figures, called *kamen kurngi*, from the wax of the wild bees. This wax, much more plastic than that of the European bee, is warmed slightly over the fire and moulded into shape by the fingers. When the craftsman is satisfied with his modelling, he paints the figures with designs. These sometimes indicate the society and *mata* (language group) of the totemic creature. McCarthy[93] figures a kangaroo, a turtle and a crocodile from a Yirrkalla collection presented to the Australian Museum by Rev. F. W. Chaseling.

Plate 103: A is the *dua* emu, *marlumai*. B is the green turtle, *gaiwa*. The totemic place of this *dua* creature is on the sea floor between Yirrkalla and Bremer Island.[94] C is the *jiritja* night-bird, *kunawak*, which was associated with the quassum, *murungo*, at Cape Shield.[95] D is the queen fish, *tinimbu*, belonging to the *jiritja* myths of Cape Arnhem.[96] E is the bandicoot, *wunt-kurn*, whose nest was destroyed by a bush-fire. The *gumaitj mata* design for fire is painted on the side of its body.[97] F is a fresh-water fish, *paipinga*, which the mythical man *Laitjun* used to catch in his fish trap at the mouth of the Koolatong River.[98] G is the dugong, *bulwakmeri*. This creature is one of the main foods of the inhabitants of the *jiritja* heaven, Naikuma.[99] H is the *dua* kangaroo, *[illegible]mbal*.

6. CREATURES CARVED IN WOOD

The aborigines of Yirrkalla, and to a lesser extent those of Groote Eylandt, carve simple wooden figures of various creatures. The fact that in the collection of the South Australian Museum there are examples of similar wooden figures from Melville, Goulburn and Elcho Islands suggests that this craft is carried out over most, if not all, of Arnhem Land.

91. [illegible]nnel (1933), Pl. XVII, Fig. F.
92. Elkin and the Berndts (1950), Pl. 19A, p. 100.
93. McCarthy (1938), Fig. 40.
94. Painted coffin, Pl. 102E, D.
95. Carved message stick, Fig. 65A, B.
96. Bark painting, Pl. 110B.
97. Bark painting, Pl. 110B.
98. Engraved pipe, Fig. 60D.
99. Bark [illegible]ting, Pl. 110A.

4: Berndt & Berndt E-5 (1946-1947) 1948
O117 Murngin O117

Blood is taken from the vagina and smeared on the *'Wawwlak's* head-band; this is represented on the back of the head, and by the dots on the forehead. It should also be smeared on the feathered head ornament (as in figure 1), which is missing from this figure. 532 778

Artist: *'Mawwu:lan*, as above.

Full length, 36 inches; length from top of head to shoulders, 8 inches; width of shoulders, 5 inches; diameter of head, 4·5 inches.

The 'Laintfuy-'Banaitfa Figures.

Plate 1, Figure 3. This remarkably fine and unusual figure of the Ancestral Being, *'Laintfuy*, is unique in its treatment, remarkably well executed, and of high aesthetic value. Along with the *'Wawwlak* sisters and the *'Banaitfa* (i.e. Figure 4), it is one of the most important carvings, and is a definite revelation of the heights to which aboriginal sacred art can obtain.

Like all these carvings, it loses something in its photographic representation; the natural colours of red, black, white and yellow give to the originals a "life" and movement that is difficult and almost impossible to translate in words or line-drawing. To see these figures in their own environment, invested with their sacred value, surrounded by postulants, amid the chanting of songs, is an experience which is outstanding and important in the life of the observer.

The *'Laintfuy* figure has arms carved out from the main trunk of its body, and shows the usual fundamental colours of white, black, red and yellow. The front of the head to the chin is painted white, while the back is left red-ochred. The top of the head is flat and has human hair, fastened on with blood. At each corner of the mouth are parakeet[19] feathers, bunched together with "sugar-bag" (wild honey) wax and stuck into the wood; this suggests a moustache – the upper lip being bare of hair, with long tufts left at each side between the lips and cheeks.[20] A feathered ornament extending from the chin, and jutting outwards to a point below the shoulders, represents a beard. The first bunch of feathers is from the parakeet, and the second seagull feathers; each is held together by a base of "sugar-bag" wax, while the latter is painted white. Feathers are tied to the end of its beard in ritual, and are called *'rayga:r* (not *'rayga*). The figure wears the red-ochred head band with white ochre and vertical lines, called *'kalamba*, that is used only for dancing. A red-ochred band extends from ear to ear, across the nose; this is the usual facia decoration, called *'nabbi*, used when dancing in sacred ceremonies. On its left arm the figure wears a parakeet-feathered armband, called *'ja:ta*. This figure should also have a *'mindgalpi* dancing dilly bag strung around its neck; but the original is missing. [302]

[19] From the sacred *'lindwi:f* bird, whose feathers are in great demand, used for making feathered string objects and in adorning *'rayga*. [237]

[20] Feathers are tied to the tips of a moustache, as a beard, in ceremony.

796 535 831 Pythons. One sits on the thighs of the other in the trench, and they have "coitus". These ceremonies are spread over a number of days, often with a certain amount of repetition.

In the meantime, the *jiritja* men have been making the *jelmalandji* 796 emblems. It is said that "the *jiritja* have got a *dua* job", and they hunt 778 all the *dua* away from the special place near the sacred ground where [616] the manufacture is in progress. This "giving the job" to the *jiritja* is termed *ir'wondji* or *maralwa*. They must be paid with food, clothing, tobacco and indigenous objects, not on the sacred ground but in the main camp. The *jelmalandji* are twelve to twenty feet in length, and about two and a half feet wide at the centre. They are formed with a solid pole, around which pads of grass and paperbark (and in these days blankets and bagging) are tied with native fibres. The outer covering of bark is then smeared with arm blood and red-ochre, on to which is fastened birds' down or wild cotton so that a meandering pattern is formed, symbolizing Julunggul. At the apex of the "post" [301] is a bunch of cockatoo feathers "like a man wears in his hair". Both *jelmalandji*, one larger than the other, have similar designs. But although one represents Julunggul, the other is said to be the "cabbage" or "wild coconut" (*galwiri*) palm, which was standing near the Wauwalak's hut, or at the palm-tree swamp from which the blood was washed down to the sacred well (or billabong). Aborigines [773] explain, "they made the Snake out of that tree", meaning either that the first *jelmalandji* was constructed from the palm tree, or that the Snake itself was derived from it. The latter is probably correct, for this "wild coconut" palm is said to be the spirit of Julunggul: "their spirits were standing in the shape of palm trees near Muruwul, when the Julunggul emerged from the well to swallow the Wauwalak".

While the *jiritja* are making the *jelmalandji*, the *dua* prepare the 796 feather down for body decoration: this has come from the *jiritja*, ● 237 who are paid for it. It is the *dua* who play the most important part in 301 the ceremonial dancing; and while the final touches are being put to 616 the *jelmalandji*, the *dua* actors decorate themselves, sticking on the feathers with arm blood. When everything is ready, the two moiety [783] groups meet each other, and rub sweat over one anothers' eyes;[6] after this, each group may see what the other has done. The *jiritja* examine the body designs of the *dua*, and the latter may observe the *jelmalandji*.

6. That is, the *jiritja* rub sweat from their armpits over the eyes of the *dua*, and *vice versa*. This process is carried out when new *ringga* objects or *nurelin* ceremonies are seen for the first time, or when novices or visitors are observing sacred dancing or ceremonial emblems (objects, body or bark paintings, and so on). It means that their eyes may now be opened, they can now see "with sacredness". "The old people have to do this to us before we can see"; for, as one informant explained, "it is like moving over some of the old Law to the youngest (younger generation), and we get trouble if we look straight away". It is called *buraguu'nirliunnu*.

6: Berndt E-5 (1946-1947) 1951
OI17 Murngin OI17

On the same evening, the young boys "passing through" the Kunapipi are placed on the heaped-up earth beside the *ba'uma* (*kanala*), and a shallow trench, some fifty feet long, is extended from one end. The *jelmalandji* have not yet been brought out. Various groups of men, representing mainly opossums, dance down this trench towards the boys. The initiates are moved to the shallow trench, and the men dance along it into the *ba'uma*. Then the boys are moved and placed in the *ba'uma* itself: this is the core of their Kunapipi experience. They are covered with bark and told to go to sleep; and as they lie there, "covered up in the hut like the Wauwalak Sisters", men dance the yam, opossum, wild honey, rat, wallaby, iguana, native companion and kangaroo - all those animals, birds, reptiles and vegetables which the Wauwalak attempted to cook. They dance down the shallow trench and almost on to the boys.

Then, suddenly, the bark that covers the boys is removed: they are dazed, as if from sleep. The older Kunapipi leaders step forward and, taking sweat from under their armpits, rub the palms of their hands across the eyes of the boys. They tell them to look up: "See, the Julunggul are emerging from the waters!"

"Which way?" they ask.

As they look they see the two Snakes standing beside the *ba'uma*, each supported by one man: these are the two *jelmalandji*, one the Julunggul and the other the "palm" tree. The boys are "very surprised", asking "What's this? Where did they come from?"

"They are the *jelmalandji*", reply the old leaders. And the two *dua* men holding the *jelmalandji* begin to shake them, "making the Snakes dance".

"Ah! ah!" The boys keep staring up at the great towering *jelmalandji*.

Then the men dance a series of totemic dances, similar to those mentioned above, before the *jelmalandji* and the boys.

These are followed by the spectacular "pokiti" head-dress dance, performed by two of the older men. They wear tall, conically shaped head-dresses, built up on top of the head from a basis of grass or bark pads, bound tightly with human-hair twine so that they taper to a point; this in turn is decorated with arm blood upon which down has been stuck to form the Snake design, and cockatoo or native companion feathers are attached to the apex. The word "pokiti" is pidgin English; the real "outside" secular name (widely known) is *kundja*, and the "inside" sacred name *milali*; when the two old men dance together they are called *jalwaru-* (or *jalwul*) *milali*. The actors are decorated with birds' down, and bunches of leaves are attached to their upper arms.

The "pokiti" itself represents the short pandanus or screw palm, seen by the Wauwalak, growing in the swamp at Muruwul: the movement of the head-dress in the dance signifies the pandanus

461 Apart from the material for the making of spears and
462 spear-throwers, and the woven baskets for carrying fire-sticks and other possessions, each man gradually collects, incidentally, as he hunts, the raw materials used for cere-
[237] monial purposes, such as the orange-red breast feathers of the Red-collared Lorikeet[14] and the fur of the Brush-tailed
[431] Opossum (*Trichosurus vulpecula arnhemensis*). Every man thus strives to accumulate articles of value, possessions or *gerri* (see page 5), of the appropriate type, which he will send later to relatives of certain orders within the intricate exchange cycle in which he has a place (pp. 67-68). The need to build up a reserve of *gerri* for use within the exchange cycle supplies still another incentive, or urge, to work, and so to be ready to meet these obligations. A man, therefore, must necessarily spend most of his waking time in working. As a craftsman the aborigine is neat, tidy and efficient, but he follows traditional methods and techniques closely, because they form part of the culture pattern into which he is born, and which is for him a heritage from ancestral times.

512 Let us look at the camp of a typical horde of Arnhem Land in the early morning, in order to get some understanding of the way in which these people live, and a picture of the daily routine of hunting and the organisation of work.

[361] The camp is situated generally on high or well-drained ground, and in the dry season is merely a cluster of fires, perhaps with a low breakwind on the windward side, each fire marking the camp of a family, or of a group of single men. In the early south-east season, during the months of

[14] These rich orange-red feathers of the Red-collared Lorikeet (*Trichoglossus rubritorquis*) are used chiefly by clans of *dua* moiety for the ornamentation of the sacred *rärgga*, and are called *tjukurr*, literally "fat".

222 484 Even when they are making for a definite camping ground, aborigines very rarely travel in a straight line. Instead, the journey is made slowly, with deviations to favoured localities which are likely to yield food or game, so that they can hunt as they go. The women and children search for vegetable food as they travel, pausing at intervals to dig yams or other roots, which are put in a "dilly bag" or basket (*bäti*) carried for the purpose. Meanwhile the men are on the lookout for sugar bag (wild honey), opossums, bandicoots (*Isoodon*), native cats (*Dasyurus*), as well as snakes and goannas (*Varanus*) or any other game which they can find. On these journeys nothing comes amiss, and in addition to the quest for food, both men and women pause to gather any materials of use in technological [314] processes, which they may see. The young branches of such [283] trees as *bulgut*, (*Brachychiton paradoxum*), which form an important source of the fibre used for making string, are cut, the bast fibre stripped and tied neatly or rolled up, to be put into their dilly bags for later use. When a "sugar bag" or wild bees' nest is found the honey and even the bee bread is eaten on the spot, unless there is a large [415] amount, when it is carried in a bark trough or a closely [237] woven basket of special type called *timbuka*. The soft black wax is roughly moulded into a ball and carried in this form, to be cleaned and refined later, and used for the mounting of certain spear heads, particularly for *ŋämbi* and *kaiyit* (flint and iron respectively).

[221] 223 512 When the vegetable harvest is at its height, about the middle of the south-east season, and the people are living chiefly on a single staple food which can be harvested readily in one place, the women generally go out in a body. [476] But at such times, although they work close together, there IS NO POOLING OF RESOURCES; EACH COLLECTS 30 FOOD INDEPENDENTLY, WORKING FOR HER OWN FAMILY OR FAMILY GROUP.

9: Thomson E-5 (1935-1943)1949
OI17 Murngin OI17

is no pooling of resources; each collects food independently, working for her own family or family group. And again, as they travel, the women gather any materials they chance to find which may be of use later, in technology. In this way the people accumulate a reserve of string, fibre, (in various stages of manufacture), resin, bone for making of yam knives and awls, for domestic use, or for canoe and bark trough manufacture, and all the materials regularly used in technology. These are carried in the *bäti*, generally in the form of neat parcels wrapped in *bärrukälla* (*Melaleuca* bark). When the men make a chance visit to an area famed for its spear woods, pigments, or other special material, they gather this and carry it in reserve, for later gift or exchange purposes. Similarly, feathers or down (*rämmän*) of birds are collected, and *bulnyin*, the fur of the Brush-tailed Possum, which is valued also for ceremonial purposes, is stripped before the animal is cooked. The spines (*dimir*) of stingrays are also extracted and all materials useful for technological and ceremonial purposes are removed while an animal is being prepared, wrapped in neat parcels in paperbark and placed in the dilly bag until required for use. As this material is generally carried by the natives in their baskets when they are hunting, they are able to make use of any moments of leisure during a halt, or while food is being cooked, to repair and maintain implements and utensils.

Certain materials, particularly the fat of *kärritjämbäl* the Red Kangaroo, and of a few other animals, and the fat and feathers of some birds, chief of which are the Emu, Plain Turkey or Bustard, the Jabiru and Native Companion, which are difficult to approach, have a high "social value" and are greatly prized. These materials have a ritual sig-

237 nificance and *must* be accumulated by the hunter.[15] This
778 fat, as well as the feathers of the birds mentioned above, are known as *tjärnbin* and play an important part in the ceremonies called *kunabibbi* and *ŋulmark*. The long bones, bills and some of the flight feathers of these birds are also accumulated and wrapped with paperbark into neat parcels called *täbarr*.

264 About midday, or at the conclusion of a drive for game
512 or fish, the people look for a suitable place to make a fire and to cook such small game as opossums, bandicoots, native cats, "goanna" or fish, as they may have secured. If they are hungry, some vegetable food may also be cooked, but the principal meal of the day is eaten in the evening
461 after the return to camp. For a couple of hours during the
512 heat of the day the natives rest. But they are rarely idle; even during these halts the men may often be seen squatting before little fires, making or repairing spears or other weapons. The women also take advantage of such respites to work at the string or mesh baskets which they carry rolled up in a half finished state, just as a white woman may take up knitting or other handiwork in moments of leisure.

[777] [15] Failure to do this would bring "bad luck", a ritual visitation, upon the hunter or on the people. The *tjärnbin*, the name given to the fat and also to certain of the feathers of the mammals and birds which have been mentioned, is believed to carry, in concentrated form, the *marr* or "spiritual power" of the animals. To waste this
[753] *tjärnbin* is to risk a ritual visitation, and if it is held for very long there is a too great concentration of *marr* so that the people will
[751] become sick. To dispel this *marr*, to avert the danger of sickness from it, a ceremony called *kunabibbi* must be held in which the fat and the feathers which are called *tjärnbin* are used and the danger
[777] is averted. It may be noted also that failure to cook game which has been killed, such as the flesh of one of the kangaroos, will bring "bad luck" and impair the *tjämbait*, the prowess or "good luck" of the hunter.

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ingenuity to cut and pound them into spear-heads, knives, and digging-bars. The majority of spears in Arnhem Land are now made from some kind of metal. Galvanized water-piping, and copper and brass fittings from wrecks, are pounded into shape; discarded fuel drums are beaten into knives and spears; nails from floating boxes are sharpened and bent into fishing hooks and harpoons.

Spears are frequently broken, lost, or given away, and consequently nomads are always looking for new spear-hafts. At least twenty varieties are made from wood and stone; the horror in primitive warfare is a spearhead made from a bunch of stingray barbs. Old-time fighting and hunting spears are cut from twelve-foot strips of hardwood and are shaved and smoothed with shells and sharp stones. Spears are seldom naturally straight; the kinks are eliminated by passing them backwards and forwards through a fire. Later they are painted and stabbed upright in the sand beside a wind-break, where they are ready for instant use.

In emergencies spears are made very quickly from the simplest materials. I remember we had a rough trip in heavy seas and blinding rain, till we found shelter behind the Wessel Island, where the boys went ashore to hunt for food. Spears had been washed overboard, and I wondered how they intended to hunt. About dusk they returned with two stingrays and a small shark. I asked how they had caught them, and I was told simply: 'I dived and caught them in my hands.' When the fish were cooking on the coals, the young hunter turned his attention to a few rusty nails in a piece of driftwood; he removed them and straightened them in his teeth. He tied them to the end of a straight stick, and called it a spear. Next morning he caught four two-pound fish with his stick and nails.

Spears are thrown from a 'mangal' or spear-thrower, a

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cattle to Yirrkala it was not long before their likeness too appeared on bark sheets. 532

I saw little-known caves on the Wessel Islands, in which totemic myths had been painted side by side with Japanese pearlers, Macassar proas, and odd European wanderers. Rock paintings are common in many parts of Australia, except in Arnhem Land where outcrops of rock are so rare that only three lots of rock paintings have been found. Here the primitive artist uses a bark sheet, which in itself indicates some measure of aesthetic impulse, for it is not easily obtained and has no permanence.

The Serpent in sacred myths is spiritually present in the 'maraian' or log painted with totemic symbols. For ceremonies, the maraian is kept in a bush shelter deep in the scrub, and initiated men guard it till the moment arrives for its dramatic elevation. They push their way through the shelter toward the over-awed initiates, and grovel, shudder, squirm, and roll over and over with strained and contorted faces, as if overcome by dread of the long maraian so carefully borne across their bodies. Wriggling along in the rear, the leader of the ceremony blows through the maraian and produces the low booming sound so feared by women and children and believed to be the voice of the Serpent. 778 531 796

Designs on maraian are made from coloured clays, string, and feathers. Hundreds of yards of string are wound on some of them, and the effect is enhanced by weaving into it white birds'-down, red and green parrots' feathers, or opossum fur. Red ochre-stone from a totem centre on Elcho Island is traded for hundreds of miles, and is in demand because of a greasy property which makes it adhere to the skin. Ordinary clay-paints crack and peel, but this is overcome by crushing orchid stems and smearing the sticky juice over the body before applying the paint. Participants in ceremonies decorate themselves with totemic designs, and glue long lines of white birds'-down on their 386 531 [778] [737] [938] [302] [824] 531 301

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cicatrix across his chest. These raised shiny ridges stand out like cords, and once they have healed they seem to cause no inconvenience. Clay is rubbed into the wound so that it will heal slowly, and the mutilated flesh becomes a raised ridge. Men with sufficient vanity treat any accidental wound in this manner, and produce broad, irregular raised areas and cicatrices over their bodies. The Stone Age warrior is proud of his cicatrices and regards them as a form of beauty. Burramurra told me that they are a sign of manliness, and added: 'When women see a man with rows of long thick cicatrices across his chest they are attracted by the glamour.' 304 [832]

Arm-bands are woven from split cane and string and are adorned with opossum fur or birds' feathers; everyone seems to wear from one to a dozen of them. Cane armlets are the most common; they are tight fitting and are usually worn till they fall to pieces. Men's muscles swell round them; as children grow, armlets become so tight and painful that they chafe the skin and have to be cut away. Mothers and fathers decorate their children with armlets and string corselets, which are said to prevent illness and sores. 301 [237] [751]

Vast quantities of string and rope resembling raffia are made from the inner bark of several trees. Varieties include string as fine as cotton, fishing-lines, rope for turtle and dugong harpoons, and two-inch cable for mooring canoes. In the making of string it is a common sight to see an old man squatting in the sand and pulling the hairs off the inside of his thigh and then picking out three fibres of bark and spreading them on his hairless thigh. With a hand on the fibres he rolls them toward him and finally with a quick thrust of the wrist he reverses the action and rolls them forward, uniting them into a single string. Fresh fibre is added as required, till in about an hour fifty or sixty feet of uniform string is completed. Harpoon and heavy ropes are 283

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283 made on the same principle. Three men each take a length of fibre. They twist them and pass them one to another to form a single length of rope. As the rope lengthens it is passed over the limb of a tree and held taut by a fourth man.

286 415 [237] [531] Woven pandanus dilly-bags are pleasing and effective examples of artistic workmanship. Sacred bags are small, but beautifully woven, and are adorned with parrot feathers or fur and sometimes totemically painted. Women make most of them and some are so closely woven that they hold water. The majority, however, are large work bags which hang down their backs and are used to carry yams, shells, roots, and small animals. Another bag is made from string, is similar to the well-known onion bag, and will hold thirty or forty pounds of yams.

292 285 293 [513] The curious 'nganmara' is peculiar to Arnhem Land. It is a house, an umbrella, a garment, a shelter from the wind and rain, a mat on which to sleep, and it is conveniently carried under the arm. This conical straw umbrella mat is woven from pandanus palm; it is circular, with an apex two feet high, and gives some slight protection from sun, wind, or rain. When the nganmara is thrown open on the ground a woman and child can be completely hidden under it. I first saw an nganmara when I was on the King River, where the woman who had it was hunting with her friends. When I asked her to show me the mat under her arm, she calmly handed me the nganmara, which was her only clothing. Knowing that strangers were in the camp, some of the women had politely donned leafy twigs, but this lady relied on her nganmara and deftly swung it from under her arm.

276 [237] In west Arnhem Land, tobacco pipes are made from large crab claws. More elaborate pipes are also made by boring the pithy centre from a soft jungle shrub and plugging

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record the event. At high tide this rock is covered by sea water, and to this day it pours out a stream of fresh crystal-clear water.

A geologist might explain this Junkgowa miracle, by observing that the spring-water holds iron in solution, and that as it bubbles up, the surrounding sand is cemented and built into a crater. A similar structure in Arnhem Bay was put to use by Macassar traders, who wedged a hollow tree trunk into the neck of the spring. The fresh spring-water rose inside the tree, ran out along the hollow limb and into the fishermen's buckets brought alongside in their canoes. Though the salt water rose over the spring, the fresh water continued to flow from this improvised fountain.

Once the Elcho Island totems had been established, the Junkgowa parted company. The Men remained to guard the site, but the female Junkgowa had many totems and unborn children to distribute, so they crossed to the mainland. They followed the shores of Castlereagh Bay, placing the totems, establishing new hordes, creating peculiar rock formations, and making food areas. By the sea they made shallow marine plains, and on them planted sea-grass, and in these salt-water pastures they left turtle and dugong. Near the head of the bay the Women produced children in greater numbers, saying: 'We must go slowly up and down, leaving hordes and totems here, or we shall never get rid of them.' This accounts for the large number of hordes around Castlereagh Bay, which has the densest population in Arnhem Land. On a wide plain they planted clumps of jungle and allocated a separate jungle to each horde for its totem centre, and in each jungle a pair of children were born and told to inaugurate a horde.

By the low-lying shores of Castlereagh Bay the Women found salt-water plains, where they opened their dilly-bags to distribute totems, but found that they had already given away all those decorated with red feathers. Those remaining

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were adorned with clay, string, and fur, and in consequence this form of decoration is still used here, whereas to the east of Castlereagh Bay strikingly beautiful decorations are made with red and green parrot feathers. 773* 779 184 531 237

Two old Men who were sitting by their fish traps, saw the Women, and said: 'What Women are these?' Self-consciously both Men and Junkgowa Women wound string round their waists and snatched green twigs for pubic shields. Later the Men invited the Women to share their camp: 'Come over here,' they said, 'we have plenty of fish.' As they approached the camp, the Women noticed that their Junkgowa dialect had undergone a subtle change, for they were unconsciously adopting the dialect of the fishermen. For many moons the Ancestresses ate fish from the fish traps, which are still a pronounced feature in aboriginal life on the salt plains. They taught the Men new songs and dances and sent out their offspring with totems and stone implements to found hordes. But beckoning smoke again rose in the west, and the Ancestresses left the Men to their fish traps.

From this point the account of their wanderings is vague, for they reached the borders of a new group of hordes which have their own creation myths, beliefs, customs, and language. Nevertheless, my informers emphatically asserted that, although these western 'foreigners' are self-contained and have no intercourse eastward, they were created by the Junkgowa. My guides had previously skirted the 'foreign' west country in canoes and pearling luggers, and when they noticed any features such as the sand dunes at Hall's Point and nearby food swamps they claimed them as the work of the Junkgowa. 773* 829

Still farther to the west, some five hundred miles from their original landing at Port Bradshaw, the Women came to the open sea at Cape Don. They were perplexed by the sight of the sea barring their way, and scratched their heads, and threw the lice into the sea. But the lice 773*

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*793 [617] marry only into another specified malk. Animals and birds assigned by the Women to the malk were accepted as the insignia or 'djungoin' of those marriage-groups.

The earthly paradise on the round hill kept the Women occupied in naming and distributing fauna, and in inaugurating [796] the famous Gunabibee ceremony in which the story of their work and adventures is preserved. In decorating themselves and their totems for the ceremony, they began the present-day practice of drawing their own blood [237] and smearing it over their bodies as an adhesive for the birds'-down so often applied now in strikingly effective designs. 752 Blood is taken by a process suggestive of barbarism and scientific knowledge of blood circulation. In west Arnhem Land string is tied above the elbow of the donor, who closes his hand and alternately bends and straightens his arm till the veins show up. One of these is nicked with a shell or spear-head, and by bending and relaxing the arm the blood is pumped into a bark container. To seal the wound the tourniquet is removed, and a boll from the cotton tree is dabbed over the opening. Half a pint of blood may be removed, and the donor and his friends unconcernedly [413] paint it over their bodies with fibre or human-hair brushes. Before it congeals they apply birds' feathers.

*793 In time the younger of the two Sisters realized that, for reasons unspecified, she was about to give birth to a child. Consequently they searched for a good camp site and found one near a lagoon. After the fashion of women, they had fossicked during the day for food, and had also gathered sheets of paper-bark to cover their hut, so that by the time they came to the lagoon they were loaded down with rolls of bark, and their dilly-bags bulged with yams, goannas, and animals.

The older Woman built the hut and bent sticks into a dome, resembling the ribs of an umbrella, and covered these [415] with bark. Meanwhile, her sister went to the lagoon for